

Title (en)

OPTICAL CONTROL PHASED ARRAY ANTENNA

Title (de)

PHASENGESTEUERTE ANTENNE MIT OPTISCHER STEUERUNG

Title (fr)

ANTENNE D'AGENCEMENT EN PHASE DE COMMANDE OPTIQUE

Publication

**EP 1628393 A4 20071128 (EN)**

Application

**EP 03733156 A 20030529**

Priority

JP 0306761 W 20030529

Abstract (en)

[origin: US2006012519A1] An optical control type phased array antenna includes a laser generating means for generating light of single wavelength, an optical path branching means for branching the light emitted from the laser generating means into first and second transmission lights, a high frequency signal generating means for generating a high frequency signal, an optical frequency modulating means for shifting the frequency of the first transmission light branched by the optical path branching means by the frequency of a high frequency signal thus generated, a spatial light phase modulating means performing spatial phase modulation of the first transmission light shifted by the frequency of a high frequency signal depending on the antenna beam pattern, and an optical path branching/multiplexing means for multiplexing the first transmission light subjected to phase modulation and the second transmission light branched by the optical path branching means. Optical path lengths of two paths between the optical path branching means and the optical path branching/multiplexing means are equalized.

IPC 8 full level

**H03G 3/26** (2006.01); **G02F 1/01** (2006.01); **G02F 2/02** (2006.01); **H01Q 3/26** (2006.01); **H01Q 3/30** (2006.01)

CPC (source: EP US)

**H01Q 3/2676** (2013.01 - EP US)

Citation (search report)

- [XY] JP H06276017 A 19940930 - NIPPON TELEGRAPH & TELEPHONE
- [Y] US 5412474 A 19950502 - REASENBERG ROBERT D [US], et al
- [XY] ANDERSON, L. P., JR.; BOLDISSAR, F.; CHANG, D. C. D.: "Antenna beamforming using optical processing", NASA CONTRACTOR REPORT, no. NASA-CR-180844, 1 June 1987 (1987-06-01), Washington D.C., USA, XP002453502, Retrieved from the Internet <URL:http://hdl.handle.net/2060/19900001894> [retrieved on 20071002]
- See references of WO 2004107567A1

Citation (examination)

- US 5333000 A 19940726 - HIETALA VINCENT M [US], et al
- EP 0194786 A2 19860917 - INT STANDARD ELECTRIC CORP [US]
- OKOSHI T.; KIKUCHI K.: "Coherent Optical Fiber Communications", 1988, KTK SCIENTIFIC, TOKYO, JP

Cited by

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Designated contracting state (EPC)

FR GB

DOCDB simple family (publication)

**US 2006012519 A1 20060119; US 7382983 B2 20080603**; EP 1628393 A1 20060222; EP 1628393 A4 20071128; JP 4066379 B2 20080326; JP WO2004107567 A1 20060720; WO 2004107567 A1 20041209

DOCDB simple family (application)

**US 53318105 A 20050428**; EP 03733156 A 20030529; JP 0306761 W 20030529; JP 2004570610 A 20030529